

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated November 1, 2006 and the telephone conversation with the Examiner on January 18, 2006. The Examiner indicated that the proposed claim amendments were very extensive and constituted new issues which may require a new search such that he declined to grant an interview.

In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claims 1, 5-7 and 9-37 stand for consideration, Claims 1, 10-11, 13, 20, 26-33 are being amended to correct formal errors and to more particularly point out and distinctly claim the subject invention. New claims 34-37 are being added. All amendments to the claims are supported throughout the specification. Applicant hereby submits that no new matter is being introduced into the application through the submission of this response.

Formality Rejection

Claims 1, 11, 13 and 20 were rejected under 35 U.S.C. §112, second paragraph, for the recitation of "files by files basis". As indicated, the claims are being amended as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Prior Art Rejections

The Examiner rejected claims 1, 5-7 and 9-33 under 35 U.S.C. §103(a) as being unpatentable over Webber et al. (US Patent No. 5,367,698), in view of Iwamura et al. (US 2004/0049553), Ofek et al. (US Patent No. 6,108,748), and Kenley et al. (US Patent No. 5,276,867). Applicants have carefully reviewed the above rejections, and hereby respectfully traverse.

The migration destination file sharing device 30 (Fig. 1) of the present invention, as now recited in claim 1, communicably connected to a migration source file sharing device 20 and a host computer 10 via a communications network CN. The migration destination file sharing device 30 includes: means for relating a plurality of migration source shared file systems (e.g., /mnt1, /mnt2 in Fig. 3) of the migration source file sharing device 20 to plurality of migration destination shared file systems of the migration destination file sharing device 30 by shared file

system basis and for determining a mount point for network-mounting one of the migration source shared file systems 21 of the migration source file sharing device 20, which is migration-related to the shared file systems 34 of the migration destination file sharing device 30 (Step 21 in Fig. 6), as a migration source shared file system 33 onto the migration destination file sharing device 30 (p. 19, last paragraph), and the migration source shared file systems each (e.g., 21, 33) having a plurality of files (e.g., FILE11, FILE12 ... in Fig. 3); means for migrating files from the migration source file sharing device 20 to the migration destination file sharing device 30 on a file by file basis per shared file system; means for setting or changing a migration status of each file; means for causing access from the host computer 10 to be switched from the migration source file sharing device 20 to the migration destination file sharing device 30; means 55 (p. 9, last paragraph) for detecting a migration status, which at least includes a “being copied” status and a “copied” status (Fig. 3; p. 25, lines 5-7; claim 10), of a file of said one 21 of the migration source shared file systems to which access has been requested by the host computer 10; first means for providing the file from said one file system 34 of the migration destination file sharing device 30 to the host computer 10 during the per shared file system file migration in a case where the detected migration status of the file is the “copied” status where the file can be used from said one file system 34 of the migration destination file sharing device 30 (*“In a case where the data requested by the clients 10 has already been copied to the migration destination storage region 34 and can be used, the client access control function 55 provides the data stored in the migration destination storage region 34 to the clients 10.”* p. 30, lines 1-2); and second means for providing the file from said one file system 21/33 of the migration source file sharing device 20 to the host computer 10 during the per shared file system file migration in a case where the detected migration status of the file is the “being copied” status where the file cannot be used from said one file system 34 of the migration destination file sharing device 30 (*“In a case where the data requested by the clients 10 has not yet been copied to the migration destination storage region 34, the client access control function 55 provides the data stored in the migration source storage region 33 to the clients 10.”* P. 30, lines 4-8).

The invention recited in claim 11 is directed to a method of causing data to migrate from a file system of a migration source file sharing device to a file system of a migration destination file sharing device via a communications network. The method comprises steps corresponding to the means recited in claim 1.

The invention recited in claim 13 is directed to a computer program stored in a computer readable medium and for causing data to migrate from a migration source file sharing device to a migration destination file sharing device via a communications network. The computer program comprises modules corresponding to the means recited in claim 1.

The invention recited in claim 20 is directed to a file sharing system that comprises a host computer, a source file sharing device, and a destination file sharing device communicably connected to the source file sharing device and the host computer via a communications network. The destination file sharing device includes a control unit which is operatively formed to perform all the operations of the means recited in claim 1.

New claim 34 recites that said second means for providing the file from said one file system 21/33 of the migration **source** file sharing device 20 to the host computer 10 during the per shared file system file migration in a case where the detected migration status of the file is a **“not copied”** status or a **“direct accessing by client at source”** status (Fig. 3; p. 25, lines 5-7; claim 10) where the file **cannot** be used from said one file system 34 of the migration *destination* file sharing device 30.

As illustrated in Figure 3, and as explained on page 24, line 12 to page 27, line 1, the use of the mount point allows the tracking of the status of the files being migrated. This tracking of a file's migration status determines whether a host computer can access the file from either the migration *destination* file sharing device or from the migration *source* file sharing device. Since the host computer can access the file no matter the status of the file's migration, the availability of the file to the host computer is not interrupted by the operation of the file migration process. In effect, the host computer can access a desired file(s) while the host computer is online with the file sharing devices, even the file is “being copied” during the per shared file system file migration.

As such, *“even during data migration, the file sharing service is provided to the clients 10 without being stopped. The clients 10 can request access to data without being cognizant of whether the desired data is located in the migration source storage region 33 or the migration destination storage region 34. The clients 10 can also request access to data without being cognizant of the migration status of the desired data. In a case where an access request from the client 10 arises during data migration (S15), the migration destination NAS 30 selects one of the storage regions 33 and 34 in correspondence to the data migration status and provides the client 10 with the requested data. That is, the migration destination NAS 30 independently executes, in parallel, the data migration processing and the processing of access from the client 10 (S13)(p. 33, 1st full paragraph).”*

Applicants respectfully contend that none of the cited references teaches or suggest such second “means for providing the file from said one file system 21/33 of the migration **source** file sharing device 20 to the host computer 10 during the per shared file system file migration in a case where the detected migration status of the file is a **“being copied”** status where the file **cannot** be used from said one file system 34 of the migration **destination** file sharing device 30” according to the present invention as now recited in claim 1.

As a result, the prior art cited cannot render any of the features of the claims invention obvious to one of skill in the art. The present invention as a whole is distinguishable and thereby allowable over the combination of these references.

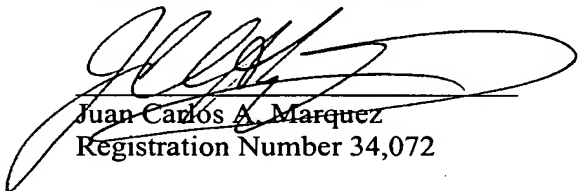
Conclusion

In view of all the above, Applicant respectfully submits that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344


Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive
Suite 1400
Falls Church, Virginia 22042
(703) 641-4200

January 25, 2007

SPF/JCM/JT